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FAINTING ATTACKS IN CHILDREN.

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IN hospital out-patient practice children are often brought with the complaint that they suffer from "faints" or "fainting attacks." The following are brief notes of some cases of this sort:

(1) Girl, aged $4\frac{1}{2}$ years. Had her first "faint" when two years of age, but no recurrence until within the last few months, when she has had two more. She "goes white" and "doesn't know you" and would fall down unless supported; a cold sweat breaks out on the forehead; she is not sick. The whole attack lasts about ten minutes. All the attacks have occurred in the afternoon and some time after a meal.

She has otherwise always been a healthy girl and has not suffered from indigestion or constipation. On examination she appeared perfectly healthy in every respect.

(2) Boy, aged 8 years. For some months past "comes over faint," turns white and has to lie down, but is not insensible; is not sick, but often has a headache after the attack. The whole attack lasts some minutes. His general health has been fair, but he is "always tired" and is backward with his lessons.

To physical examination he appeared rosy and well-nourished and the heart perfectly healthy. He is perhaps rather mentally defective.

(3) Girl, aged $5\frac{1}{2}$ years. When two weeks old had a "collapse" lasting some hours and has had these on and off since, but more frequently of late. The attacks now usually occur before breakfast, but she may have as many as three in one day. She "goes pale," "can't stand," and sometimes retches. The whole attack lasts from half to three-quarters of an hour.

A nervous, rather poorly-nourished, dyspeptic child. No anæmia and no signs of organic disease.

(4) Girl, aged $8\frac{1}{2}$ years. During the last twelve months is subject to "faints," especially before breakfast, but also on standing for any length of time. In the attack her "lips go white" and she has to lie down. It passes off in a few minutes.

A thin, nervous, excitable child, but not anæmic. The heart quite healthy.

(5) Girl, aged $7\frac{1}{2}$ years. For two weeks past has tended to "faint" when getting ready for school in the morning. She "flushes and then goes white," and has to lie down. In a quarter of an hour the attack has passed off. Physical examination entirely negative.

(6) Girl, aged 10 years. For two or three months has been subject to "fainting attacks," especially when dressing in the morning. She goes "right off" and is "quite white." May remain in this condition for about half an hour. Her general health is poor; she has a bad appetite and is subject to headaches and constipation.

A poorly-nourished, ill-developed child; no anæmia; heart normal.

(7) Boy, aged 12 years. Has had "fainting attacks" at irregular intervals for the last six years, but they are getting more frequent. Feels "bad" when the attack is coming on, looks "white and drawn," "not really insensible," and can answer if spoken to. The attack usually passes off in less than five minutes. His health otherwise is very good, but he seems "lacking in energy."

A healthy-looking, well-nourished boy, with no signs of organic disease.

(8) Girl, aged 5 years. "Faints in the morning" for the last three months, usually when at breakfast. She "goes very white" for a few minutes and then it passes off. She sleeps badly and is worried about her lessons.

(9) Boy, aged 6 years. Six months ago had scarlatina. When he returned to school began to have "faints," which have recurred frequently since. They usually occur about midday, just before his dinner. He "goes pale, and dark under the eyes," and if sitting at table may fall forwards. He comes round again in a few minutes.

A rather pale, thin boy, not anæmic ; heart normal.

(10) Girl, aged 11 years. Subject to "faints" for some months, but they are getting more frequent. They usually occur in the early morning or at school ; goes "ghastly" in the attack and may vomit, but is not insensible, and it passes off gradually in a few minutes.

A tall, thin girl, not anæmic. Heart shows a musical systolic murmur at the apex, but is otherwise normal. Other organs healthy

It will be noticed that both sexes suffer from the attacks, but girls rather more frequently than boys. Occasionally they date from quite early life, but usually they do not appear until about the fifth year or later, and are commonest after the school age. In general features the attacks are very similar in all cases. The child is observed to "go white" ; he may fall down, but does not lose consciousness entirely, although in some cases he is dazed, or even only semi-conscious. Occasionally retching or even vomiting occurs, but in no case was urine voided involuntarily. The attack lasts for a period varying from a few minutes up to half an hour or even longer, and passes off gradually. Sometimes it is followed by headache. The commonest time for the attacks to occur appears to be in the morning, often before breakfast or whilst the child is getting ready for school. Many of the children are nervous and dyspeptic, but in a considerable number the general health is quite good and the appearance of the child flourishing. There appears to be no relation between the attacks and the occurrence of any previous disease.

On only one occasion have I been fortunate enough to witness an attack. The patient in that case was a boy aged 10 years, who had been subject to faints for some time. When standing up to be examined he suddenly became pale and giddy, the pulse very slow and feeble, and the heart sounds toneless. He was quite conscious, but somewhat confused. On laying him down he gradually revived, and then flushed a little.

I have not been able to discover any cause for the susceptibility to these attacks, but over-strain at school certainly seems to play a part in some cases. Dyspepsia and nervousness are so common amongst the hospital class of children that their association with the attacks may easily be a coincidence.

The diagnosis is not difficult, minor epilepsy being the only condition which might be mistaken for them. In "faints," however, consciousness is not completely lost, and their duration is usually much longer than that of an epileptic seizure.

As to the pathogeny of the attacks, it is difficult to speak with certainty. Mothers, and sometimes doctors, are apt to ascribe them to "heart weakness," and are often much alarmed in consequence. There is no reason to suppose, however, that the heart is primarily at fault.

In only one of the above cases (No. 10), for example, was anything abnormal detected on examination of the heart, and in that instance there was no reason to suppose that the systolic murmur present was any real indication of cardiac inefficiency. Further, one does not find that children with valvular or congenital heart disease are in any way specially liable to attacks of faintness.

It seems much more probable that the condition is primarily nervous in origin and due, perhaps, to a temporary sympathetic paralysis leading to uncontrolled action of the autonomic system with vaso-dilatation in the splanchnic area and inhibition of the heart. Whether liability to the attacks may be the consequence of a defective suprarenal secretion resulting in a lowered sympathetic "tone" is an interesting subject of speculation.

As regards treatment, I have always found that removal from school, change of air to the seaside, and the use of strychnine as a tonic along with attention to the digestive organs, speedily results in a disappearance of the attacks.

THE SEQUEL TO A CASE OF EPIDEMIC CATARRHAL JAUNDICE.

By JOHN A. PROCTER, L.S.A., and GORDON WARD, M.D.,
Lydd, Kent.

THIS case seems to us to call for record because (1) there has been much epidemic jaundice among our troops abroad, and, if the supposition made in this case is correct, similar sequels are to be expected in the future; (2) an extraordinary attack of meningism preceded death—at a time when meningococcal meningitis was epidemic in the country; (3) many diagnoses, not one of them correct, were made by the six or seven medical men who saw the case; and (4) the diagnosis of splenic anæmia (passing into the final stage of Banti's disease) seemed at one time to be justified by the clinical findings as much as by the results of blood examination.

The case will first be described and then the above points dealt with briefly and in turn.

The patient was a boy, aged 12½ years, when he first came under treatment in his final illness.

Family history.—The mother and father are alive and well; there is no suggestion of syphilis in either of them or in their family history. There is no tuberculosis. They have several healthy children, of whom the patient was the eldest. They have not lost any other children. Five years ago three of the children had jaundice, and there were perhaps a dozen cases altogether in the village. The family have been for many years under the care of one of us (J. A. P.), so that any unusual factor in the family history would have become known.

Previous history.—Until the attack of jaundice above mentioned he had enjoyed good health, although some of his relatives think he was not so strong as the other children. He was always a big boy for his age. His more immediate history showed repeated epistaxis for the last six months, and swelling of feet and stomach for the last three weeks. Until then he had been at work in the fields, having been excused school to work as a farm-hand during the war.

History of final illness.—He was first seen by one of us (J. A. P.), who found œdema and ascites and a spleen extending to the umbilicus. The liver was not enlarged. Diarrhœa was present. There was no albuminuria. He was then seen by Mr. Frank Coke, of Ashford, and a provisional diagnosis of sarcoma made. It was noted that the gums were congested, and bled readily, and that no enlarged glands could be felt. As the diagnosis was not felt to be beyond suspicion, Mr. Coke took him into Ashford Hospital with a view to exploratory operation. The boy improved so much that this was not done. He was sent home. About a month later he commenced to go down-hill again. There were slight ascites and diarrhœa, but there was no œdema nor bleeding from gums. The spleen was noted as reaching two inches below the ribs. It is noted that the liver was not enlarged, but there is no note that it was small. He looked pale, but had no yellowish tinge. Four months after this his general condition was the same, but the gums were again bleeding, and there was œdema. Epistaxis was occasional all through the illness. His blood by this time had become practically normal. Tuberculosis, “tabes mesenterica,” seemed a not unlikely diagnosis in view of the continued diarrhœa and ascites. It was thought that the splenomegaly might be symptomatic of

some interference with the portal circulation, a view supported by the bleeding from the nose and gums. The recovery of the blood condition while the general condition remained had seemed to rule out splenic anæmia.

A few weeks later the patient had an attack of catarrhal pharyngitis, which was very prevalent at the time, and seemed to make a good recovery from this.

A week after this he suddenly became acutely ill. When seen he was quite unconscious, had marked head retraction, and seemed on the point of death.

Two days later the head retraction had vanished; he was almost quite clear mentally, but had a few purpuric areas on the flanks. He had no jaundice, but much ascites.

He died two days later, having rapidly developed jaundice and very marked dyspnœa.

It should be remarked that the patient lived in a very isolated position and in an old low-roofed and doubtfully water-tight house. Frequent visits were therefore impossible, and the means of scientific investigation limited.

An autopsy was made thirty-six hours after death. The following points are the only ones which require notice:

General emaciation; sacral bed sore; general bile-staining.

Spinal cord normal; fluid clear. Brain normal except for congestion. No hæmorrhages. Membranes strip readily; normal on section; not bile-stained.

Inspissated pus in crypts of right tonsil. Dilated veins at œsophagogastric junction. Small areas of hæmorrhage in stomach. Nothing else abnormal from mouth to large intestine.

Liver shows marked "hob-nail" cirrhosis, small and retracted; weight 28 oz. On section areas of liver tissue bulge forward from the surrounding fibrous trabeculæ. It is calculated that there is at least twice as much fibrous as liver tissue.

Spleen large, weight 29 oz.; normal on section. A few adhesions. No thrombosis of splenic or portal vessels.

Left lung completely collapsed in a cavity full of recent lymph and exudation (microscopically very few organisms could be seen). On section lung is brown and fleshy and airless. Right lung normal; not œdematous.

A few enlarged mesenteric and cervical glands; no other glands enlarged.

The case a sequel to epidemic jaundice.—We are not in a position to search the literature on the subject, so that we cannot say if

cirrhosis has been recorded in this connection before. In this case it seems the only possible aetiological factor.

The attack of meningism.—We use the term “meningism” because symptoms of meningitis occurred for which no physical basis was found after death. The symptoms seemed to follow an attack of influenza, and were exceedingly severe. The head retraction was extreme and mental disturbance in keeping. There were also a few purpuric spots. The symptoms seemed to quite justify a diagnosis of cerebro-spinal meningitis, either meningococcal or—in view of other features of the case—tuberculous. Yet not so much as œdema of the meninges was found, there was no dilatation of ventricles, nor any hæmorrhage, nor the least abnormality beyond slight congestion, which was properly attributed to other causes. Cerebro-spinal meningitis had been present at a farm a few miles off, but otherwise there was none in the immediate vicinity.

The difficulty in diagnosis.—It is difficult to believe that the liver was anything but much reduced in size during the whole of his final illness, but this fact was not detected until the day before death. This does not reflect favourably on ourselves, nor on the several other medical men who saw the case, but we would plead in extenuation the presence of ascites and the difficulty of making a proper examination, *e. g.* it was not possible to stand anywhere near erect in the room in which the patient slept.

The most favoured diagnoses in this case were at various times splenic anæmia, tuberculous peritonitis, and meningitis and meningococcal meningitis. Sarcoma, sporadic acholuric jaundice *sine* jaundice, and portal thrombosis were also suggested. It is a remarkable fact that the patient was at various times in a condition which warranted these varying diagnoses.

The blood condition is set out below :

	Date.				
	June 16, 1915.	Aug. 6, 1915.	Jan. 12, 1916.	Feb. 25, 1916.	Feb. 28, 1916.
Red cells . . .	3,190,000	3,820,000	5,570,000	—	—
Hæmoglobin . . .	49 %	—	82 %	—	70 %
White cells . . .	5300	3800	10,000	30,000	8000
Polymorphs . . .	55·6 %	50·8 %	53·0 %	92·2 %	91·8 %
Eosinophiles . . .	0·4 %	0·2 %	10·0 %	—	0·2 %
Mast cells . . .	2·6 %	0·4 %	0·6 %	—	—
Transitionals . . .	6·4 %	7·8 %	2·4 %	1·0 %	2·0 %
Small mononuclears .	33·2 %	38·8 %	32·6 %	4·8 %	4·6 %
Large mononuclears .	1·6 %	1·6 %	1·2 %	1·8 %	0·4 %
Myelocytes . . .	0·2 %	3·4 %	0·2 %	0·2 %	1·0 %
Normoblasts . . .	—	—	—	240	128

On all occasions, except the third, considerable anisocytosis and polychromasia were noted. The first two estimations were in keeping with a diagnosis of splenic anæmia. The boy's age was against this diagnosis, but the epistaxis and bleeding from the gums were rather in favour than otherwise. When the blood became practically normal, in spite of the lack of improvement in the patient's general condition, this diagnosis seemed to be untenable. On the other hand, such variations in the blood, more or less independent of the general condition, can occur in acholuric jaundice, and jaundice is now known not to be an essential part of this syndrome. The presence of nucleated red cells in the last two counts, together with marked qualitative changes and the supervention of jaundice, were held to make the probability of acholuric jaundice still more probable. The stools were not discoloured. We are of the opinion that the jaundice when it did occur was quite possibly hæmolytic, and not due to the cirrhosis, although the possibility of the chest condition having been a determining factor in the disturbance of hepatic function is not lost sight of.

The leucocytosis we assume to have been due to the chest condition. The presence of a certain number of nucleated red cells is by no means unknown in acute heart failure, but is unusual.

The case might even now be considered an example of Banti's disease, but in our opinion the post-mortem appearances, as much as the clinical history, negative this view.

TWO CASES OF INTESTINAL OBSTRUCTION IN CHILDREN.

By T. JASON WOOD, M.D.,
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INTESTINAL obstruction in children, apart from intussusception, is decidedly rare; the two following cases would seem worthy of record on this account.

TUBERCULOUS TUMOUR OF MESENTERY AND INTESTINE.

CASE 1.—I was asked to see a male child, aged 12 months, in April of last year. He was a particularly fine, well-nourished baby, and had enjoyed good health until the present illness. The patient had been ill some four or five days; the first symptoms were asso-

ciated with the respiratory organs (cough, etc.), but for two days before I saw him there had been vomiting and difficulty in evacuating the bowels.

Examination showed a well-nourished child above the average in size. Temperature 103° F. The respirations were increased in frequency and there was a slight cough from time to time. Sonorous rhonchi were heard on auscultation, but there were no signs of pneumonia.

The abdomen was considerably distended; slight general tenderness was noted, but there was no local swelling or tenderness to be made out. Rectal examination revealed nothing abnormal. There had been no passage of blood by the rectum, but small quantities of *fæces* with mucus had escaped from time to time. The child evidently had intermittent abdominal pain at fairly short intervals. I did not feel at all clear as to the diagnosis, and, as the consultation was held at midnight, I suggested that the child should be moved to a nursing home early in the morning for operation if it was thought desirable.

When I saw the child at the nursing home he seemed much better than on the previous night, the abdominal distension had diminished and the temperature was lower. It was possible now to make out a tumour in the abdomen in the region of the umbilicus, which was more or less cylindrical in shape and gave one the impression of an intussusception. I made this diagnosis and advised operation. Operation was delayed until the following day owing to the reluctance of the parents to give consent, as they thought the child was so much better.

The abdomen was opened to the right of the middle line and the tumour exposed; it was found to consist of a dense mass, apparently tuberculous in nature, infiltrating some three or four inches of the small intestine and its mesentery. It was fixed and could not be delivered through the wound. The intestine above it was distended as compared with that below, which was partly collapsed. No further tuberculous nodules were seen in the peritoneal cavity. It did not seem practicable to excise the whole diseased area, so a lateral anastomosis was effected between loops of intestine above and below the obstruction. The child made a rapid recovery from the operation and the bowels acted without trouble.

CYST OF THE MESENTERY CAUSING VOLVULUS.

CASE 2.—A female child, aged 3 years. She was said to have always been delicate, was late in walking, and complained frequently

of a "dragging" pain in the abdomen, which caused her to bend forward when walking. The history was given me that about two months before I saw her she had had an attack of abdominal pain and vomiting, with symptoms of obstruction: her medical attendant had felt a tumour in the abdomen. She recovered from this attack and had been going about as usual. When I saw her early in January she had been ill a week with abdominal pain. She was said to have had no evacuation of the bowels for five days, and had vomited every day. The vomit was intestinal in character. The child was desperately ill, the eyes were sunken and the pulse small. There was no rise of temperature. The abdomen was distended and peristaltic movements were visible. No tumour could be felt owing to the distension. Rectal examination was negative.

As operation offered the only prospect of recovery, though this was very poor, I ordered her immediate removal to the infirmary and I operated a few hours later. On opening the abdomen a tumour about the size and shape of a duck's egg was at once found. It was a cyst in the mesentery of the lower part of the ileum. On puncturing the cyst yellow fluid containing abundant shining crystals of cholesterin escaped. A condition of volvulus had been set up by the weight of the cyst, and the bowel at the point of pressure was gangrenous and had begun to leak. The gangrenous bowel was brought out of the abdomen and resected, metal drainage tubes being tied into the open ends of the intestine, and fixed to the skin, and the operation concluded as rapidly as possible. The patient only survived the operation about twelve hours, but this result was to be expected owing to her desperate condition.

The question arises as to what would have been the best way of dealing with the cyst had the case been seen in the absence of obstruction. It would probably not have been possible to dissect it out without damaging the blood supply of the intestine, and if this were the case resection of the affected bowel would seem to be necessary. A possible alternative to resection might be to fix the cyst to the abdominal wall and drain it, but the obvious objection to this course would be that the intestine would be fixed at one point and obstruction might be caused by such fixation.

The question of diagnosis in these two cases is of interest, but I venture to think only from an academic point of view: in each case there were obstructive symptoms with the presence of a tumour. The most natural diagnosis to make in each case was probably intussusception, though some of the classical symptoms were absent; but the practical point was that operation was the only treatment. It is

to be greatly regretted that the second child was allowed to go so long in a state of obstruction, as the probability is that her life would have been saved by an early operation.

Royal Society of Medicine.

NEUROLOGICAL SECTION.

November the 25th, 1915.

Paralysis of the Sympathetic (Birth Injury) with Heterochromia Iridis.—Mr. M. S. MAYOU.—The patient was a boy, aged 8 years. He had been delivered by forceps with great difficulty. It was noticed not long after birth that there was a slight droop in the right eyelid. The right pupil was smaller than the left, but reacted to light. The right iris was more bluish in colour as compared with the left, which contained more brown pigment. The right pupil did not dilate so fully as the left, and was not dilated by cocaine, whereas the left dilated fully. There seemed to be some diminution of lacrymal secretion, and sweating on the right side of the head, together with a slight enophthalmos. The fundi were normal. There was no difference in pigmentation on the two sides. Vision $\frac{6}{6}$ in both eyes.

This was the third of its kind that had come under the speaker's care. All had followed prolonged labour with the use of instruments. The alteration in the colour of the iris was probably due to the fact that the paralysis had taken place in very early life, before the development of the pigment in the stroma of the iris which took place soon after birth. The fact that there was no alteration in the retinal pigment further pointed to the condition being due to a failure in the development of the pigment in the iris stroma.

Intermittent Tonic Spasm affecting chiefly the Lower Extremities, progressive in character, following Measles.—Dr. T. GRAINGER STEWART.—The patient was a girl, aged 8 years. She had always been under-sized and excitable and rather shaky. She walked at the age of 10 months, talked at 2 years, and was rather backward at school. The family history was good.

Six months ago she had had measles and pneumonia. She was able to get up and walk after the attack, but her mother noticed that her feet were inclined to turn inwards. She had been steadily getting worse since, and had lost the power of walking alone. She could only walk on her toes, and had to be assisted. During the past three months her speech had become affected, and the right arm was becoming stiff, the child tending to hold the arm extended at the elbow with the wrist flexed and the whole arm pronated (tip position). No history of fits or incontinence.

Present state: Intelligence good. Cranial nerves: Face asymmetrical; tongue deviated to left. Motor system: Arms—no wasting; fair power;

at times considerable tonic stiffness in the right limb and not in the hand, and at times there is involuntary movement of the limb but not of the hand; co-ordination fair. Legs—no wasting; calves hypertrophied; can move legs at hips and knees. Generally the legs are in a state of spasm, the feet in position of talipes equinus, the knees straight, and the hips straight. When there is no spasm the legs can be freely moved at all joints. At night spasm varies, sometimes there is a continuance of rhythmic spasms; co-ordination fair. Gait: Walks on the tips of her toes, and needs help. Sensory system: No defect. Reflexes: Tendon-jerks—arms brisk, knee very brisk, ankle brisk when spasm is absent; otherwise not obtained. Superficial reflexes: Abdominal, present and equal; plantar, flexor.

Philadelphia Pediatric Society.

JOINT MEETING OF THE NEW ENGLAND PEDIATRIC SOCIETY, THE PEDIATRIC SECTION OF THE NEW YORK ACADEMY OF MEDICINE, AND THE PHILADELPHIA PEDIATRIC SOCIETY.

November the 9th, 1915.

Acidosis in Children.—Dr. A. E. TAYLOR.—The elimination in a child whose diet was known before, during, and after the attacks of vomiting was studied. The urine was also examined forty-eight hours before the onset of an attack. The quantitative determination of the acid elimination ascertained by estimation of the different ketones showed that for two days before the attack there was no acidosis: acidosis did not appear till three days after the onset of vomiting. This seemed to indicate that acetonuria was the direct result of the starvation and had direct connection with the intermittent vomiting. He concluded that there were two types of acidosis, one connected with intermittent vomiting and one dependent upon the withdrawal of food and having nothing to do with the intermittent vomiting.

Metabolism Studies before and after Splenectomy in Congenital Hæmolytic Icterus.—Drs. R. M. PEARCE, O. H. P. PEPPER and S. GOLDSCHMIDT showed a boy, aged $5\frac{1}{2}$ years, with a history of congenital hæmolytic icterus, complicated by left hemiparesis, aphasia, and otitis media. There was a tendency to localised œdema and obstinate constipation. Two other children in the family had been slightly jaundiced after birth. Comparison of observations made before and after splenectomy showed the following results:

(1) A slight positive nitrogen balance before splenectomy was followed by an increased retention eight days after the operation.

(2) The output of uric acid showed a decrease of 47 per cent. after the operation.

(3) In the period directly after the operation a change in the partition of creatinin and creatin elimination occurred; the total creatinin, however, showed but slight change.

(4) Other urinary nitrogen constituents showed no variation from normal, and no change was found in the hydrogen ion concentration.

(5) The utilisation of nitrogen was good at all times.

(6) Fat metabolism was normal.

(7) There was a large loss of iron through the fæces before splenectomy, followed by a decided decrease (40 per cent.) after the operation.

(8) The excretion of urobilinogen and urobilin in the fæces was markedly diminished after splenectomy, the amount excreted after the operation being about one-ninth that excreted before splenectomy.

Electro-cardiographic Tracings in Children.—Dr. E. B. KRUMBHAR stated that in studying diseased hearts in young children he had found that there were no electro-cardiographic tracings of the normal heart in infancy and childhood, and that hence they had nothing with which to compare their findings in abnormal conditions of the heart in children. He had taken tracings of the foetal heart just before and just after the cord was cut. These showed that the heart acted much better just before the cord was cut than for a time afterwards. At birth there was a preponderance of the right ventricular sounds, and this persisted up to the sixth or eighth week.

Lobar Pneumonia in Childhood: Roentgen Ray findings and an Explanation of Bronchial Signs.—Dr. HOWARD H. MASON, of New York City, said that during the past two years at the Presbyterian Hospital of New York all the cases of lobar pneumonia in children had been X-rayed at least once, and some had had repeated roentgenograms. From the study of thirty-seven complicated cases of lobar pneumonia Dr. Mason drew the following conclusions. They all showed definite shadows, which were always quite dense and uniform, and usually definitely outlined.

The shadow was always so placed that it touched the pleura at some point.

The early shadows were triangular in shape, with their bases on the pleura and their apices separated from the region of the root by normal lung.

In their later development, the shadows extended in size and became uniform from the periphery to the root of the lung. When the shadow involved this entire stretch, bronchial voice and breathing were present, but not otherwise. It is believed that the inference is justified that the dimensions of the shadows correspond to the extension of consolidation.

The following conclusions were drawn:

(1) The consolidation of lobar pneumonia in children begins in that portion of the lung which lies just beneath the pleura.

(2) A central pneumonia in the strict sense never occurs. Silent consolidations are subpleural consolidations, and are separated from the hilum by normal lung.

(3) Bronchial breath and voice sounds are dependent upon the presence of a medium of comparatively uniform density from the site of their origin (the trachea and large bronchi) to the point where the ear or stethoscope is applied. These conditions are fulfilled when the consolidated area extends from just beneath the ear to the region of the hilum.

Dr. LEON T. LEWALD, of New York, exhibited a number of lantern slides that were confirmatory of Dr. Mason's. One case of very early pneumonia showed the practical application of Dr. Mason's work. The first slides shown illustrated the bronchial tree after injection through the bronchoscope; these had been made with the assistance of Dr. H. D. Lynah and showed that there was normally a dense shadow about the hilus on each side, and this had led to many misinterpretations of radiographs and to the diagnosis of tuberculosis when in reality there was nothing abnormal in the region of the hilus. Another slide showed a roentgenogram of a child who was taken ill suddenly and complained of pain in the right lower quadrant of the abdomen. There were other physical signs suggestive of appendicitis, but there were

very few suggestive of pneumonia. Indeed, it was impossible to tell from the physical signs whether one was dealing with a pneumonia or an appendicitis. The radiograph showed an area of consolidation in the right lung, and the diagnosis of pneumonia was made. On the following day a definite pneumonia could be made out and the child went on to crisis and recovery. This case demonstrated the utility of radiography, for otherwise the child would have been subjected to an altogether unnecessary operation. The next slide shown emphasised the necessity of radiographing a child in the presence of conditions that were not readily recognised. The subject of this picture was suffering from symptoms which were thought to indicate the necessity for a rib resection. No X-ray examination was asked for and the operation was performed. The child received no relief and later was radiographed, and a foreign body—an upholstery tack—was located in the right bronchus. Upon careful inquiry it was found that this tack had been lodged there for two years. Dr. Nathan Green removed this tack through the bronchoscope by means of an electromagnet. The last slide exhibited showed a wedge-shaped shadow which might easily have been mistaken for an encysted pleuritic effusion, but it resolved of itself as was disclosed by confirmatory radiographs; this also showed how a mistake might have been made and an unnecessary operation performed.

Tuberculosis in Infancy.—Dr. CHARLES HUNTER DUNN said that in many articles the conclusions drawn were not supported by the final proof afforded by a post-mortem examination. The importance of tuberculosis as a cause of death in the first two years of life was shown by the fact that in a series of sixty-two successive autopsies in the Infants' Hospital, Boston, tuberculosis was found in twenty-five, and was considered the direct cause of death in twenty-three cases. In general, the reports of post-mortem findings showed a greater frequency of involvement of the peribronchial and mediastinal lymphnodes than of the mesenteric. Possibly the tubercle bacillus could enter the body of the infant without a lesion at the portal of entry, but this was still an open question. In Dr. Dunn's series of autopsies the lungs were cut up into the smallest fragments in search for the primary lesion, which was actually found at the portal of entry in twenty-two of the twenty-five post-mortems. The primary lesion was found in the lungs in twenty cases and in the intestines in two cases, which suggested that in Boston at least the most frequent mode of infection was by the inhalation of the tubercle bacillus from a human source, but that the infection through the ingestion of the bovine bacillus in contaminated milk might occur. The primary lesion in the lung was quite easily recognisable. In most cases it was a circular area varying in size from that of a pea to that of a hazel nut. The centre was caseous, but usually of a greyer colour than the yellowish-white caseation seen in the secondary lesions. In some there was calcification. Around the periphery of some of the smaller lesions were numerous miliary tubercles suggesting direct extension. The favourite situations for the primary lesion in the lung were at the apex and near the hilus. The lesion which was found in the intestine in two cases and considered primary was a tuberculous ulceration, and while there was nothing about the appearance of these ulcerations differing from secondary ulcerations, they were considered primary because in them the mesenteric lymphnodes *only* were tuberculous and they were the only cases in which tuberculosis of the mesenteric lymphnodes was found without tuberculosis of the bronchial lymphnodes.

The bronchial lymphnodes were found tuberculous in the twenty cases having a primary lesion in the lung, and in three cases in which no primary lesion was found. Tuberculous ulceration of the intestinal mucous membrane was found in seven cases besides the two in which this lesion was considered primary. In all these cases the ulcerations were multiple. There was no case showing tuberculosis of the mesenteric lymphnodes without an intestinal lesion.

Other secondary lesions.—Chronic tuberculosis of the lymphnodes was found in every case. A more or less generalised miliary tuberculosis of a tuberculous meningitis was found in twenty-three cases. In two cases were chronic lesions found only. Tuberculous peritonitis was found in two cases. Solitary tubercle of the brain was found in one case.

In five cases animal inoculations were made to determine whether the infection was of the human or of the bovine type of bacillus. The bovine was found in one case and the human in four cases.

In this series of cases the diagnosis of the tuberculous nature of the disease was made during life in twenty-three out of twenty-five cases. There were three important points besides the existence of such definite manifestations as tuberculous meningitis or tuberculous peritonitis on which the diagnosis of tuberculosis in infancy was based: (1) The finding of physical signs suggesting tuberculosis in the chest; (2) the evidence given by the tuberculin reaction; (3) the evidence by Roëntgen ray examination of the chest. In this series of cases the continuous von Pirquet reaction was employed, with the result that it was positive in six cases and negative in twelve cases, and in the other seven cases was not done. It must be remembered that many of these cases were acutely ill, and that the reaction was observed very shortly before death when resistance to infection was probably at a minimum. On the whole, Dr. Dunn believed that the value of the cutaneous tuberculin reaction in infancy was not so great as many writers would lead us to suppose. A negative reaction seemed to be a frequent finding in any stage of the disease and gave no evidence at all. A positive reaction in infancy meant tuberculosis.

Roëntgen ray examination of the chest was made in thirteen cases in the series, and was positive in every case.

The Practical Value of the Guinea-pig Test for the Virulence of Diphtheria Bacilli (based upon 1054 virulence tests).—Drs.

J. A. KOLMER, S. S. WOODY, and E. L. MOSHAGE.—The morphological, biological, and tinctorial qualities of diphtheria bacilli were so distinctive that with comparatively little experience they were readily detected in properly made cultures, and if diphtheria bacilli were to be found on mucous membranes only in diphtheria and disappeared in a reasonable length of time after the clinical evidences of infection had disappeared, nothing would be simpler or more satisfactory than the bacteriological diagnosis of the majority of these infections.

Following an attack of diphtheria the bacilli might persist for long periods of time on the mucous membranes, even though the patient was in all respects restored to health. Most physicians had encountered these cases in their private and hospital practice, when prolonged, expensive, and tiresome quarantine was necessary because of the possible danger of transmitting virulent bacilli to others, until repeated cultures showed the patient to be, temporarily at least, free of diphtheria bacilli.

It was now known that these "carrier" cases, both the convalescent and

the person who had never had clinical diphtheria, might carry either virulent and disease-producing bacilli or non-virulent bacilli; in not a few instances both virulent and non-virulent forms were present on the same mucous membrane. In practice it would be simplicity itself to prolong the quarantine of all convalescents until repeated cultures showed the absence of diphtheria bacilli, and likewise to quarantine all healthy "carriers" who had been in contact with a person with clinical diphtheria. The procedures, however, might bring great hardship to a person or family by reason of prolonged isolation and detention; the attending physician might regard lengthy quarantine as a reflection upon his ability and a reversal of his opinion regarding the condition of his patient, and he might in this manner suffer in professional reputation.

It was readily understood, therefore, that some practical and reasonably sure means of differentiating virulent from non-virulent diphtheria bacilli was highly desirable. The test should be one that was easily applied, *i. e.* sufficiently delicate to detect the potential harmfulness of bacilli with low-grade virulence, and it should give the result as quickly as possible.

Before any test could be accepted as sufficiently safe in practical work to regard a "carrier" as free of danger to himself and others on its evidence, several important questions must be answered with reasonable positiveness. (1) Could bacilli that were without disease-producing powers according to these tests, resume virulence and induce disease? (2) Might not bacilli of low pathogenicity produce an infection in a second individual of low resistance while causing no apparent harm to the carrier? (3) Might not virulent bacilli gradually lose virulence and later resume full pathogenic powers under conditions over which they had no control?

There was reason to believe that in some instances the prolonged number of positive cultures following diphtheria were due to the presence of harmless diphtheria-like bacilli of "carriers" that had no connection with the attack of clinical diphtheria. They were present before the attack of diphtheria and were likely to remain for an indefinite time afterwards. At first they might be overgrown by the disease-producing bacilli or overlooked in cultures, but as the latter disappeared the non-pathogens became prominent again and yielded a formidable line of positive cultures.

It was clearly apparent, therefore, that some means of differentiating between pathogenic and non-pathogenic diphtheria bacilli must be available if the diagnosis and control of diphtheria was to be based upon bacteriological examination.

The animal inoculation test remained as the only means now known for determining the virulence of a culture of diphtheria bacilli. To be reliable and satisfactory as a practical measure an animal inoculation test must fulfil certain fundamental requirements.

Focal œdema and even the slightest evidence of toxæmia in the test animal with absence of these signs in the control animal indicated virulence, even though the animal did not succumb in the four-day period of observation.

The classification of Westbrook, Wilson, and McDaniel was used.

The results of 1054 tests conducted after this method showed that the granular types of diphtheria bacilli were virulent in 70 per cent. of the cultures from the throat, nose, and ear: barred bacilli were found of equal virulence as the granular types.

The long solid bacilli were found virulent in about 42 per cent. Cultures of short solid bacilli were uniformly non-virulent. In the Philadelphia

Hospital for Contagious Diseases in all cases where the virulence test was negative the patient was considered non-infectious and fit for release from quarantine. The number of return cases had become practically negligible.

Abstracts from Current Literature.

Diseases of Nutrition.

The lipolytic power of the blood serum of infants in disorders of nutrition (*Riv. di clin. pediat.*, 1915, XIII, p. 613).—**E. Palmegiani** performed five series of experiments on (1) 8 healthy children, (2) 24 suffering from disorders of nutrition, (3) 22 with other diseases but healthy intestines, (4) 6 with secondary diarrhoea, (5) 4 with eczema. The conclusions she arrived at were that the blood serum even at birth shows a marked lipolytic power of almost equal intensity in healthy infants, in those who are ill but have regular or constipated stools, and in those with secondary diarrhoea. In the few infants affected with eczema there was no difference from the normal, but a general conclusion must not be drawn from so few cases. In children with disorders of nutrition causing serious wasting, the lipolytic power was slightly below the average. The authoress refrains from drawing a general conclusion from this diminution, but as the difference was decided in comparison with the other series of cases examined, inclines to the belief that it must be considered a pathological phenomenon inherent in such diseases, and may be of importance in the genesis of grave disturbances of metabolism.

VINCENT DICKINSON.

The acetone content of the organs in children dying from diseases of nutrition (*Riv. di clin. pediat.*, 1915, XIII, p. 332).—**G. B. Allaria** from his researches found there was not much difference in the amount of acetone in the different organs of children dying of serious disorders of nutrition in comparison with those of children dying of other affections. He therefore concludes that there is no abnormal accumulation in the organism of the infant dying from this cause, in spite of the marked loss of flesh, and especially the striking destruction of fatty tissue, and also in spite of the fact that infants in this morbid condition are in want of carbohydrates, which are the most active anti-acetogenic substances.

VINCENT DICKINSON.

The ætiology of rickets (*Lancet*, 1915, I, p. 956).—**L. Findlay** reviews various theories regarding the causation of rickets, and presents a statistical study of the home conditions of 400 to 500 rachitic children. The points investigated were: (1) The length of time the child was breast-fed; (2) the order of the child in the family; (3) the condition of the bowels previous to the onset of the trouble; (4) the amount of air-space in the house allowed to the child; (5) the number of stairs up the house is situated; (6) whether or not the child has been taken much out of doors. His main conclusions are that dietary plays no part in causation, but that defective air-space and lack of fresh air are important factors. In his opinion, the two factors—confinement and deficient fresh air—act by making the child more lethargic and less inclined to exercise itself, although it is quite

possible that deficient oxygenation of the blood itself helps towards the production of the special rachitic metabolic error. The results which the author has obtained in the treatment of the disease with massage, passive movement, and electricity are, he thinks, strongly confirmatory of the view that deficient exercise engenders the condition. So far as his experience goes no variety of dietetic or medicinal treatment brings about the same rapid and complete cure. The children are encouraged to walk and yet he has not seen any bad effects follow such practice. J. ALLAN.

Late rickets (*Le Nourrisson*, 1914, II, p. 257).—A. B. Marfan gives a detailed account of the pathology and symptoms of ordinary rickets. Ordinary prolonged rickets is defined as beginning before the age of two years and continuing after four years. The epiphyses remain large. The rickety rosary persists and the fontanelle remains open. Kyphosis and scoliosis are very apt to develop in these cases. Skiagrams show irregular thickening of the epiphyseal cartilages, a hollowing out of the extremity of the diaphysis, a greater transparency than normal of the osseous tissue in the zones of growth, and smaller and less opaque centres of ossification in the epiphyses and in the short bones. The evolution of the disease may continue up till 11 years of age. True late rickets, on the other hand, may begin between the ages of 8 and 18 years. The bony changes resemble those of ordinary rickets, but the skull is usually spared. Pains in the lower limbs are frequent and severe, and paresis is common. A case is described in detail where the disease first appeared at the age of 16 after many years of invalidism from gastro-intestinal disturbances. The tuberculin and Wassermann tests were not performed, nor was a satisfactory section of the bony tissues obtained. The bone marrow, instead of being fatty, consisted in some parts solely of blood and lymph cells, and in others of fibroid tissue. The skiagrams resembled those of ordinary rickets. The epiphyseal cartilages of the radius and ulna were preserved. The epiphyses of the same bones and of the carpus were very incompletely and irregularly calcified. The sesamoid bones of the thumb had disappeared. Hutinel's form of osteo-muscular dystrophy with dwarfism presents the ordinary rachitic deformities, except that the face, skull and teeth are not affected. Paraplegia accompanied by amyotrophy, and without changes in the reflexes or electrical reactions, is always present. The subjects of this variety of rickets are dwarfs, often adipose, and show arrested genital development. Several members of the same family are affected. The relations of osteomalacia and tardy generalised rickets are then discussed. Osteomalacia consists of generalised bone decalcification, while rickets affects one particular part of the bone, namely, the epiphysis. Further, osteomalacia does not enlarge the epiphysis and spares the ribs. Pain, paresis and deformity are far more marked in osteomalacia. Osteomalacia is fatal, rickets is curable. No satisfactory accounts of infantile osteomalacia have yet been published. Tardy rickets with non-symmetrical deformity, *e.g.* scoliosis of young girls, genu valgum and flat foot, usually arises in persons who have had the slight infantile form, and the anatomical features are similar. Marfan made sections from a case of scoliosis in a young girl and considers that the changes found were typical of rickets. Lordosis, with which albuminuria is often associated, obliquity and convergence of the internal borders of the scapula, swelling of the inner extremity of the clavicle with subluxation of the sterno-clavicular articulation, and curving inwards and forwards of the inferior extremity of the radius producing difficulty in wrist extension, are

among the less common forms of tardy rickets. The last-mentioned is more frequent among girls, and is sometimes hereditary and familial. Tardy rickets is often associated with physical and intellectual torpor, with hyperplasia of lymphoid organs, and of the palatine and pharyngeal tonsils, and atony of the smooth and striated muscular systems, giving rise among other troubles to cyanosis of the extremities, headache, and intermittent albuminuria. The extremities are cold and of a violet red colour. The headache varies in position, occurs at all hours, and sometimes interferes with work. Marfan considers tardy rickets is due to chronic infections, such as hereditary syphilis and tubercle. It may arise after febrile diseases, *e. g.* scarlet fever, varicella, broncho-pneumonia and osteomyelitis. Adrenalin in 15-20 drop doses of the 1 in 1000 solution three times a day is strongly recommended to relieve pain and to prevent the progress of the deformity.

CHRISTOPHER ROLLESTON.

The Roentgenographic appearances in rickets (*Journ. Amer. Med. Assoc.*, 1915, LXV, p. 2062).—**R. W. Lovett**, in a paper which is well illustrated, discusses the appearances found in between 500 and 600 skiagrams taken of cases of rickets. In this disease constant changes are found while the process is active, and are located most markedly in the epiphysis and the epiphyseal end of the shaft, though they also involve the shaft itself. The most important are (1) delayed ossification and indistinctness of the epiphysis, (2) fraying out of the end of the shaft next to the epiphyseal line, (3) broadening of the end of the shaft next to the epiphyses, (4) cortical thickening on the concave side of curved bones, and (5) areas of diminished density in the bone shadow of the shaft. Periosteal thickening and multiple fractures often occur in the acute stage of the disease. The differential diagnosis is also discussed, and it is pointed out that in chondro-dystrophia fetalis the epiphysis is clear and regular in outline, but the ends of the diaphyses are broadened. The distinction between rickets and congenital syphilis is more uncertain in children old enough to have acquired the former disease.

T. R. WHIPHAM.

Treatment of rickets with anæmia and large spleen by radio-therapy (*Riv. di clin. pediat.*, 1914, XII, p. 707).—**F. Lanzarini** records three cases. After about a month of treatment there was an increase of hæmoglobin of 5, 8, and 10 per cent. The red cells were slightly increased, and hence the globular value rose. In two cases a definite leucocytosis occurred on the day when the treatment took place. In the third this leucocytosis reached a high figure, but disappeared rapidly. No marked modification in the leucocytic formula was noticed, except an increase of polynuclear neutrophiles on the day of treatment. In two cases there was increase of body weight. In all the cases diminution in the volume of the spleen took place a fortnight after the treatment was commenced, and was progressive, reaching the normal limits in one case.

VINCENT DICKINSON.

Infantile scurvy (*Journ. Amer. Med. Assoc.*, 1915, LXV, p. 1003).—**A. F. Hess** draws attention to the fact that in addition to the bone-lesions the heart is enlarged chiefly on the right side in cases of infantile scurvy. Oedema is also present in some degree: it occurs early in the course of the disease and involves most frequently the eyelids. It is often manifested as a firm oedema over the lower ends of the tibiæ, infiltrating the skin, and is

readily overlooked as it does not pit on pressure. It may also infiltrate the muscles, and when it occurs in the thigh it may be mistaken for the typical sub-periosteal hæmorrhage. It would further seem probable that the nerves are involved in infantile scurvy. The knee-jerks are increased, and there are indications of superficial tenderness of the limbs, and neuro-cedema of the optic discs. In these ways infantile scurvy assumes actual relationship to beri-beri, in which the right side of the heart is also hypertrophied and the nerves are invariably involved. This correlation was emphasised still further by a dietetic test in which it was found that the addition to the diet of the pericarp of wheat caused, in many instances, a prompt amelioration of the symptoms, when no other antiscorbutic food was included, although it did not suffice to cure the disorder.

T. R. WHIPHAM.

Infantile scurvy (with twenty-six personal observations) (*Arch. de Méd. des Enf.*, 1915, XVIII, p. 181).—**J. Comby.** *Ætiology.*—Preserved food, sterilised milk, and sameness of diet conduce to scurvy. All the children affected were artificially fed. Sixteen were less than one year old; ten over a year; fourteen were boys, twelve girls. Rickets was present in the majority. *Symptomatology.*—The onset is insidious; the child becomes languid, pale, and feeble; he then cries on being touched, or even approached, and cannot walk; his lower limbs become as if paralysed, and painful (twenty-five out of twenty-six cases). Hæmorrhages sometimes occur in the periosteum (seven cases), sometimes in the gums (twenty-one cases). Disseminated purpura was noted in three cases. Marked anæmia in a child artificially fed should suggest the possibility of the appearance of scorbutus later. No deaths occurred. *Treatment.*—The patient should be kept quiet in bed. All preserved foods should be stopped, and fresh, boiled milk given instead. Lime-juice should be given three times a day. Beef-juice can be given to children over a year.

F. R. B. ATKINSON.

A case of Barlow's disease (*Arch. de Méd. des Enf.*, 1915, XVIII, p. 89).—**M. Lasalle.**—Breast-feeding had to be supplemented in this case from the first, and at the age of six months the child was being fed entirely on cow's milk. Diarrhœa and skin eruptions then set in and Mellin's food was substituted with complete success. At or about the age of 16 months constipation, gingivitis and an ecchymosis on the ear and thigh appeared. The usual treatment was adopted with a satisfactory result. The author considers that the addition of carbohydrate has nothing to do with the disease. Carbohydrates cause constipation and the formation of sulphurated ethers in the urine. The various methods of preparation of patent foods remove the antiscorbutic powers. Patent foods are very dangerous when given for prolonged periods and when the date of their preparation is remote.

CHRISTOPHER ROLLESTON.

Diseases of the Blood.

Blood coagulation in infancy (*New York State Journ. Med.*, 1915, xv, p. 348).—**H. L. K. Shaw** and **F. J. Williams** consider that the clinical significance of the blood coagulation time in young children has not received from the pædiatrician the attention it deserves. They give the technique of two methods employed by them, namely, (a) the method of Dale and Laidlaw; (b) the method of Russell and Brodie. With the former method they

found that the average coagulation time was 1 min. 30 sec. in a series of 108 healthy infants under two years of age. This is a slightly shorter time than in adults. With the Russell-Brodie method they obtained the following results: Average time of coagulation, (a) in 95 examinations in infants under one year of age, 3 min. 47 sec.; (b) in 35 examinations in infants between one and two years of age, 3 min. 54 sec.; (c) in 20 examinations in infants between two and three years of age, 3 min. 58 sec. This is a much lower average than in the case of healthy adults. As the result of their investigations the authors believe they have established a normal coagulation time for infants.

J. ALLAN.

The relation between the blood-pressure and the viscosity of the blood (*Arch. de Méd. des Enf.*, 1915, xviii, p. 261).—P. Gautier studied this relation in forty normal children, aged from 1 month to 13 years, with Pachon's oscilometer and Hess's viscometer. He found that the maximum tension increased from the time of getting up in the morning until going to bed in the evening. The older the child the wider the difference between the morning and evening records. The minimum tension also increased in the course of the day, but in a less degree than the maximum. The pulse-pressure was therefore higher at the end of the day than in the morning. The viscosity of the blood behaved in an exactly opposite way, being high in the morning and then falling. The younger the child the lower the pulse-pressure and the sphygmo-viscometric relation, the viscosity varying only slightly with age. Before two years of age the sphygmo-viscometric relation oscillated between 0.75 and 1.05, later it ranged from 1 to 1.50. In eight anæmic children there was a fall in the viscosity, the average being 3.04 as contrasted with the normal 4, and the sphygmo-viscometric relation was higher than in healthy children of the same age (*cf.* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1913, x, p. 78).

J. D. ROLLESTON.

Hæmorrhagic conditions in infancy (*Cleveland Med. Journ.*, 1915, xiv, p. 533).—J. Phillips reports: (1) Three fatal cases of intracranial hæmorrhage in infants, aged 5, 6, and 7 days, in whom the late onset of the hæmorrhage suggested that it was not due to trauma at birth, but to a defect in the blood- and vessel-wall. In support of this view was the fact that in one case there was bleeding from the bowel and into the scrotum, and in the other bleeding from the vagina. Two died immediately after operation, and in one no operation was performed. (2) A hæmorrhagic condition due to congenital syphilis in a baby 11 weeks old, who had numerous petechiæ and bleeding from the mouth and nose. Death occurred at the age of 4 months. The necropsy showed a very large liver and spleen, and evidence of syphilis in the viscera and bones. (3) Two cases of hæmorrhage in the newborn successfully treated by injections of horse-serum.

J. D. ROLLESTON.

Gaucher's disease (*Bull. Johns Hopkins Hosp.*, 1916, xxvii, p. 1).—J. H. M. Knox, R. Wahl, and H. C. Schmeisser report two cases in infants, sisters, who did not thrive from birth, and who died, one at 11 months, the other at 12 months of age, from gradually increasing weakness. The most striking clinical feature was the great enlargement of the liver and spleen. The blood picture was that of a moderate anæmia. The leucocytes were rarely increased, and for the most part were markedly reduced in

number. The skin in both cases had a peculiarly yellowish-brown hue, more marked on the face and exposed surfaces. In one case the diagnosis was confirmed during life by the examination of an excised lymph gland. Microscopically in both cases nearly all the organs were found to contain large, pale, granular or fine vacuolated cells, in which there was a peculiar refractive substance having the chemical and staining properties of lipid material. These cells were apparently identical with those described by Gaucher. These cases and that of Niemann (*vide* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1914, XI, p. 448 and 460) are the only ones in which the disease has been reported in infancy. The presence of cherry-red spots in the maculæ of one of the cases, resembling those found in amaurotic family idiocy, suggests that the essential degeneration in the latter condition may possibly be of a similar nature.

J. D. ROLLESTON.

Gaucher splenomegaly diagnosed by spleen puncture before operation (*Journ. Amer. Med. Assoc.*, 1915, LXIV, p. 1907).—**E. P. Bernstein.**—The following case is claimed to be the first of its kind in the literature. The patient was the sister of a boy who had been successfully splenectomised about two years previously for what was clinically diagnosed as Gaucher's disease and proved so after operation by histologic study of the spleen. Other than this family history and a moderately enlarged spleen, there were no symptoms pointing to or warranting the diagnosis of Gaucher's splenomegaly in the sister. A simple puncture with a good-sized needle and syringe was made and sufficient spleen pulp and blood mixture was aspirated to render a good-sized drop in the needle. This was spread over cover-glasses, fixed with methyl alcohol and stained with the Giemsa solution. The characteristic multinucleated endothelioid cells were found in abundance and the diagnosis established. The spleen on removal showed the typical pathological picture of Gaucher's disease both in spreads of the spleen pulp and sections of the organ.

T. R. WHIPHAM.

Acute lymphatic leukæmia (*Journ. Amer. Med. Assoc.*, 1915, LXIV, p. 1630).—**C. E. Simon** and **C. C. W. Judd** have obtained post-mortem from the glands of a male patient, aged 20 years, who died from acute lymphatic leukæmia, the same organism which appears to occur so constantly in Hodgkin's disease, viz., the *Corynebacterium lymphmatis granulomatosa*. Since Steele found an organism of the same order in another case of acute lymphatic leukæmia, a boy, aged 12 years, this, they say, can hardly be a coincidence, and naturally raises the question of a possible relationship between the two diseases. Further observations, however, are necessary.

T. R. WHIPHAM.

A case of lymphatic leukæmia with apparent cure (*Journ. Amer. Med. Assoc.*, 1915, LXV, p. 948).—**R. A. Ireland** reports the case of a boy, aged 10 years, who had been out of sorts for a month. His skin was bronzed and the glands were everywhere enlarged. The spleen also was slightly enlarged. The blood showed a leucocytosis of 20,000; polymorphonuclears 2·5, small lymphocytes 67·5, large lymphocytes 30 per cent.; platelets absent; red cells 3,000,000; hæmoglobin 75 per cent. The case was treated with the syrup of the iodide of iron and Fowler's solution internally, and Roentgen-ray exposures were made for five minutes each day (? where, T. R. W.). There being no improvement at the end of ten days the treatment was discontinued, and 0·3 grm. of neosalvarsan was given.

This was repeated twice at intervals of six days and three weeks. At the time of the last injection the white cells numbered 16,000; polymorphonuclears 16, small lymphocytes 69, large lymphocytes 15 per cent. The boy had gained 3 lb. in weight and had improved in colour, and Roentgen-ray treatments were started again. Two and a half months later the white count was 12,000; polymorphonuclears 44, small lymphocytes 43, large lymphocytes 12, eosinophiles 1 per cent. The Roentgen-rays were discontinued, and iron and arsenic were given again for a period of two months. Six months later the polymorphonuclears were 37.5, esinophiles 3.5, basophiles 1, small lymphocytes 37.7, large lymphocytes 15, large mononuclears 2.3, and transitionals 3 per cent. The red cells and platelets were also normal.

T. R. WHIPHAM.

Benzol in leukæmia (*Journ. Amer. Med. Assoc.*, 1915, LXIV, p. 1734).—**F. H. Smith** gives a further account of his two cases of leukæmia, treated with benzol, which have already been reported (*vide* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1914, XI, p. 451). The patient with lymphatic leukæmia has died, but the boy, a case of the 'splenomyelogenous type, is alive, a year and seven months after the disease was discovered, and suffers from no subjective symptoms. His latest leucocyte counts have varied between 4400 and 29,260, and he is still taking benzol (20–24 drops thrice daily) intermittently. The writer does not consider that benzol is curative in its action, but regards it as having a most remarkable inhibiting influence on the course of the disease. At the same time he strikes a note of warning as regards the dangers attending its use, such as the onset of an aplastic anæmia.

T. R. WHIPHAM.

Splenectomy for splenic anæmia (*New York State Journ. Med.*, 1914, XIV, p. 435).—**R. S. Fowler** records a case in a female infant, aged 14 months, in which removal of the spleen was followed by much improvement in the general health and in the anæmic condition.

J. ALLAN.

Splenectomy for splenic anæmia (*Lancet*, 1914, II, p. 1247).—**W. Essex Wynter** and **J. Bland-Sutton**.—The patient, a boy aged 13 years, had been ailing for six weeks, suffering from lassitude and some enlarged glands. He was sent for treatment by the school doctor, and was thought at first to have Hodgkin's disease, but improved under treatment as an out-patient. In July, 1914, the boy was anæmic and thin, but made no definite complaint of pain or discomfort. The thoracic and abdominal viscera appeared normal apart from the spleen, which was much enlarged, and extended $4\frac{1}{2}$ in. below the left costal margin and inwards to the middle line. Small, firm glands could be detected in the neck, axillæ, and groins. The thyroid was enlarged, especially the isthmus. Blood-count: Red cells, 4,200,000; white cells, 2600; hæmoglobin, 60 per cent. A differential count showed no disturbance of the ordinary proportion in white cells. Temperature 99° F. Urine normal. Splenectomy was done in July, and in November a blood-count showed red cells, 4,800,000; white cells, 8000; hæmoglobin, 62 per cent.

J. ALLAN.

Splenectomy in splenic anæmia (*Glasg. Med. Journ.*, 1915, II, p. 241).—**J. S. M'Kendrick**, in recording a series of cases illustrating some of the rarer blood diseases, describes two cases of splenic anæmia in children—a

boy, aged 15 years, and a girl, aged 8 years—in which splenectomy was performed with apparent cure. Both cases have remained in good health since the operation.

J. ALLAN.

The rational treatment of Hodgkin's disease (*Journ. Amer. Med. Assoc.*, 1915, LXIV, p. 1953).—J. L. YATES and C. H. BUNTING give a long dissertation on Hodgkin's disease in general, laying special stress on its ætiology and treatment. A previous paper by the same authors relating to the *B. hodgkini* has already been abstracted (*vide* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1914, XI, p. 454). As regards treatment, the authors' aim is (1) to exclude all possible liability to reinfection, hence a removal of the primary source of infection and its portal of entry; (2) to eliminate by excision of glands of at least the major portion of the diseased tissue with the bacteria and toxins contained therein, in order to prevent further dissemination and to place the balance of power in favour of individual resistance; (3) to destroy the remaining fraction by any and every means, especially by the Röntgen ray, hygiene, and vaccine therapy; (4) to convert into fibrous tissue by hygiene and the Röntgen ray such irremovable abnormal tissue as cannot undergo resolution; (5) to continue treatment as circumstances seem to indicate until a clinical and X-ray examination and a normal blood picture indicate that a cure has been of at least a year's duration.

T. R. WHIPHAM.

A case of lympho-granulomatosis (Sternberg's disease) (*Arch. de Méd. des Enf.*, 1915, XVIII, p. 429).—M. BLANC describes this case occurring in a boy, aged 5 years. The disease is due to inflammation and development of granulation tissue tending to induration and necrosis. It remains localised in the neck or mediastinum and in all advanced cases the spleen is affected. The diazo reaction is generally positive. X-ray treatment is the best. Arsenic by injection has been recommended.

F. R. B. ATKINSON.

A case of infectious purpura (*Arch. of Ped.*, 1915, XXXII, p. 528).—P. S. POTTER records a fatal case of about seven weeks' duration in a boy, aged 10 years. The right tonsil was ulcerated, and cultures from it showed streptococci, staphylococci, a fusiform bacillus, and a spirillum. Hæmorrhages occurred in the skin, and there were also hæmatemesis, melæna, and hæmaturia. Cultures of the blood showed streptococci.

J. D. ROLLESTON.

Intramuscular injections of whole blood in the treatment of purpura hæmorrhagica (*Journ. Amer. Med. Assoc.*, 1916, LXVI, p. 20).—H. W. EMSHEIMER reports the case of a boy, aged 5½ years, whose only illness had been measles two years previously. A profuse hæmorrhagic eruption and hæmaturia developed rapidly, with anæmia and slight fever. The passage of blood *per urethram* was accompanied by terrific pain. There were no abdominal crises nor history of rheumatism, hæmophilia, or other abnormal blood condition. Calcium lactate in large doses, epinephrin, arsenic, codein, and later subcutaneous injections of horse-serum failed to have any effect. Consequently 20 c.c. of blood drawn from the median cephalic vein of a relative were rapidly injected intramuscularly, with the result that in twelve hours the hæmaturia became much less marked, and on the following day the urine was clear. At the end of ten days there was no

blood to be seen microscopically. The improvement in the skin condition was less striking, but steady. Some fresh hæmorrhage appeared, but the eruption gradually faded, and in six weeks all evidence of hæmorrhagic diathesis had entirely disappeared.

T. R. WHIPHAM.

The specific cure of Leishmaniosis in children ('*La Pædiatria*,' 1916, xxiv, p. 1).—**R. Jemma** states that the treatment of this condition by tartar emetic does not induce any special lesions in the organs of children suffering from it; its action is one of protistolysis, commencing as a protoplasmolysis, then passing into nucleolysis, and ending with the disappearance of the blepharoblast. The protistolysis is evident after the first injection, and is complete after the third; it exerts its influence first on the vascular endothelium of the liver, then on the mesenchymatous cells of the bone marrow, and finally on those of the spleen.

VINCENT DICKINSON.

A new preparation of antimony for intramuscular injection in infantile Leishmaniosis ('*La Pædiatria*, 1916, xxiv, p. 65).—**G. Caronia** has experimented with several substances, and gives the preference to acetyl-p-aminophenylstibiate of sodium on account of its greater efficacy, easy absorption, and less toxicity. It is freely soluble in distilled water, and contains 38.5 per cent. of antimony. The solution, however, changes after a time, especially in concentrated solutions, and should therefore be freshly prepared for use. The dose varies according to age. Below 2 years it is advisable to begin with 3 cgrm., rising to a maximum of 10 cgrm. Beyond 2 years we may begin with 5 cgrm., rising to 15 cgrm. In some cases the author has used 20 cgrm., but such a high dose gives rise to considerable infiltration, which hinders the subsequent process of treatment and may cause abscess. But 15 cgrm. is not to be recommended even in older children, since by continuing a maximum of 10–12 cgrm. a cure may be equally well obtained without inconvenience, though requiring a longer time. The injections are made every other day or every third day on alternate sides, an increase of 2 or 2½ cgrm. being made each time. No intolerance or renal lesions are produced. Details of four cases thus treated are given. The ages varied from 1 to 3½ years. In one the disease had lasted 20 months, and was cured in 3 months. Two others, in which it had lasted 6 and 8 months, were cured in 10 and 16 days respectively.

VINCENT DICKINSON.

Treatment of infantile kala-azar by splenectomy ('*Arch. de Méd. des Enf.*,' 1915, xviii, p. 349).—**J. S. de Souza** is of the opinion that in cases of splenomegaly splenectomy is indicated when the blood shows a diminution in the number of red corpuscles together with a leucopenia. Strictly speaking, the blood examination should be completed by a determination of the fragility of the red cells. In cases where the diminution in the number of reds is solely due to an increased fragility a leucopenia is not found, but, on the contrary, a normal or even increased leucocyte-count. In kala-azar a diminution of both the red and white cells is one of the characteristics, and the author, therefore, proposes splenectomy in this disease. By the operation he seeks only to cure the anæmia due to the excessive macrophagic action of the spleen, which tends to kill the child, and not to bring about a disappearance of the parasites from the bone-marrow, liver, and peripheral circulation. The author has performed four splenectomies in children for kala-azar and one for splenic anæmia. In every case

the red and white cells have increased after the operation and the hæmoglobin value has risen. He has also removed the spleen in two cases of malaria. Of the kala-azar cases two died, one from influenza, one from gastro-enteritis. The ultimate result in the other two is not stated, but the parasites still persisted. In the splenic anæmia case the red cells rose after the operation from 840,000 to 2,830,000, and the whites from 5000 to 17,200, and the hæmoglobin from 20 to 55 per cent. The child was discharged from hospital apparently well. The result in one of the malaria cases was apparently successful; but in the other there was a further diminution of the reds after the operation. De Souza prepares his patients for operation by a course of calcium chloride for four or five days previously, and on the day itself by an injection of horse-serum. In operating he favours an incision parallel to the course of the inferior intercostal nerves, *i.e.* from the end of the seventh or eighth rib to the umbilicus, or beyond if necessary.

T. R. WHIPHAM.

Orthopaedics.

Structural changes in congenital hip dislocation (*Journ. Amer. Med. Assoc.*, 1915, LXV, p. 1805).—**W. Blanchard** states that eight months is the shortest time in which a dependable acetabulum reforms, and any radical change in the position of the leg interrupts the rebuilding process. The unchanging pressure of the femoral head accelerates the absorption of the extraneous structures that obstruct the acetabulum. After the plaster spica has been removed, the child should be left to its own devices, and the longer the abduction remains, the more stable the joint will become. The best functional result may be obtained in children from 3 to 5 years of age and with from 2.5 to 4 cm. of shortening. There is no age limit, upward. The older the child and the greater the shortening, the more secure the replacement, if it can be made. The difficulty of reduction increases with the shortening after 4 cm. have been passed. A reduction by steps can be gained in older children with 5 cm. or more of shortening. The head should be brought as near as possible to the acetabulum and put into a plaster spica just the same as if reduced, and a second attempt, made three weeks later, may result in a satisfactory replacement. Reduction should be delayed in all cases of 3 years or younger and that show 2 cm. or less of shortening. The child needs all the freedom that can be safely accorded, and a great majority of unilateral cases will do best in unilateral plaster spica. If the roentgenogram shows delayed ossification from rickets or other causes, the reduction must be postponed. Roentgenographic observations of the hips should be taken before and after reduction, and at frequent intervals, so that a careful watch may be kept of the bone regeneration that produces a good joint.

T. R. WHIPHAM.

Anteversion of the neck of the femur with congenital dislocation of the hip (*Journ. Amer. Med. Assoc.*, 1915, LXV, p. 1801).—**R. A. Hibbs** draws attention to the fact that, although anteversion of the head and neck of the femur is known to occur in cases of congenital dislocation of the hip, its influence on the final result of treatment is not generally recognised. A normal gait cannot be attained when the deformity exists to any considerable degree, as, with the toe and patella pointing forward, the head of the femur cannot be completely in the acetabulum. The defect seems to be due to a twist in the shaft of the femur, since X rays show no change in the relation

of the head and neck to the two trochanters. The author advises that in such cases an osteotomy should be done at the lower third of the femur before any attempt is made to reduce the dislocation. After the bone has united the patient is allowed to walk from eight to ten weeks until the external rotation of the leg is corrected by exercises and the normal position in walking is attained. At this point in the treatment the dislocation should be reduced.

T. R. WHIPHAM.

Congenital dislocation of hip treated by Lorenz' method (*Dublin Journ. Med. Sci.*, 1915, II, p. 212).—**W. S. Haughton**, at the Section of Surgery of the Royal Academy of Medicine in Ireland, showed a case which had been under treatment for a little over two years, which was about double the normal time required. The delay was first due to gastric attacks and then to measles. Double dislocation cases always took longer to treat, as the stages had to be gone through more gradually. Skiagrams before the treatment and during its progress were exhibited, and attention was directed to the relation of the head of the bone to the acetabulum, the development of the bone, the development of the femur, the development of the acetabulum. At the same meeting **W. C. Stevenson** showed a child who had been treated for double congenital dislocation by the Lorenz method. He said that the left hip was easier to reduce than the right, and it was also found easier to keep it in position. The right hip was only recently taken out of plaster. Massage treatment was now being carried out in order to develop the strength of the leg.

J. ALLAN.

Pseudo-coxalgia (*Clin. Journ.*, 1915, XLIV, p. 361).—**E. M. Little**.—There are fifty cases on record, forty in boys, and ten in girls. It is almost always unilateral. There are no known causes; hypothyroidism has been suggested. The X rays show flattening of the femoral head. The epiphysal line between the head and neck is irregular and widened. Light spots are to be seen in the head. The process is a chronic one and may last for two or three years when the patient has lost his limp, but there may be some shortening and reduction of abduction and rotation. The author recommends fixation in abduction by plaster of Paris. Two cases in boys are described.

F. R. B. ATKINSON.

Infantile osteochondritis deformans of the hip (*Riv. di clin. pediat.*, 1915, XIII, p. 401).—**F. Detilala** describes eight cases. The disease is rare; out of 1500 cases of affections of the hip in the orthopædic clinic he found only six cases. It occurs mainly between the ages of 3 and 10 years, and usually affects one side only. It is characterised clinically by atrophy of the limb, limitation of abduction, elevation of the great trochanter, scarcely perceptible shortening, Trendelenburg's sign, and lameness; radiograms show deficient and irregular development of the cephalic nucleus, zones of juxta-epiphysal atrophy of the femoral neck, and slight changes in the acetabulum; differential diagnosis must be made from congenital dislocation of the hip, coxa vara, tuberculous coxitis, and infantile arthritis deformans. Tuberculosis, infectious diseases, and traumatism play no part in its causation. The origin of the disease is to be sought in a congenital change either of the epiphysal cartilage of the upper end of the femur, or of the epiphysal nucleus, giving rise to insufficient and irregular processes of ossification. From this point of view it is closely related to congenital coxa vara, and there is a possible

connection between this characteristic alteration of the skeleton and the endocrinic glands.

VINCENT DICKINSON.

Juvenile deforming osteochondritis of the hip (*Journ. Amer. Med. Assoc.* 1915, LXV, p. 1637).—**G. J. McChesney** gives an account of this condition, which was first described by Perthes two years ago. The disease appears when the child is in good health, and is not especially concerned with any specific trauma. It occurs most frequently in boys during the second five years of life. A slight limp is noticed early and persists till late, becoming more and more intermittent, and is accompanied by slight or no pain. It may last from two to four years and then lessens, in spite of greater destruction of the epiphysis. Abduction is limited and is marked at first, and there is also some limitation of inward and outward rotation; occasionally hyperextension is limited and slight shortening and atrophy are noticed. Pathologically there is a delay in ossification of the cartilage of the epiphysis, and to a lesser extent in the juxta-epiphysal cartilage of the neck and isolated areas in the acetabulum. There are also calcareous nodules in the ossification centre of the epiphysis. As a result flattening or crushing of the epiphysis occurs, and later the flattened epiphysis breaks into two or three pieces, and finally unites with the neck, which has become shorter and thicker than normal. The condition must be distinguished from tuberculosis of the joint, juvenile deforming arthritis, and coxa vara. In some cases no treatment appears necessary, but if the symptoms are increasing, correction of abduction and the application of a plaster spica may be necessary, or extension and massage may be tried. Occasionally other joints may be similarly affected. The writer records three cases from his own practice.

T. R. WHIPHAM.

Traumatic dislocation of the hip-joint in a child (*Lancet*, 1916, i, p. 80).—**H. Platt** and **H. M. von Mengershausen** report this case in a boy, aged 6 years. When running down a hill he slipped, fell forward on to his face, and rolled over and over several times. He felt something "give" in his left hip. He was seen within an hour of the accident. It was impossible to obtain an accurate description of the exact violence and the position of the limb at the time. The left lower limb was held in a position of flexion, adduction, and inversion at the hip. The limb was obviously shortened and the trochanter unduly prominent. On palpation the trochanter was found to be elevated above Nelaton's line, and the head of the femur could be felt on the dorsum ilii. There were no signs of bruising and no crepitus was elicited. Under anæsthesia the dislocation was reduced with ease by flexing the limb on the abdomen and then abducting as in the Ridlon method of reducing a congenital dislocation. A long Liston splint was then applied. An X-ray plate taken after reduction showed no local anatomical abnormality which might have predisposed to dislocation, the femoral heads and acetabula being perfectly symmetrical. At the end of three weeks the splint was discarded, and the boy was allowed to kick his leg about at will. He rapidly gained mobility in the affected joint. When seen two months after the accident he was walking without perceptible limp. The hip showed full range of motion and there was no pain or instability. Reference is made to some previously recorded cases.

J. ALLAN.

Unilateral rotatory displacement of the cervical spine (*Interstate Med. Journ.*, 1915, xxii, p. 983).—**H. J. Fitzsimmons** reports four cases, all in children, of rotatory displacement between the axis and atlas to one side without any symptoms of injury to the spinal cord. Three were the direct outcome of an injury, but the fourth followed a mastoid operation without any definite cause. The cases illustrate the following symptom-complex from which a diagnosis of this type of "twisted neck" can be made: (1) Inability to rotate the head without tilting the chin on the side affected. (2) Prominence of the transverse process of the axis on the side affected. (3) Occipital pain. (4) Absence of muscle contractions which can explain the deformity and restriction of rotation. (5) Absence of nerve lesions. (6) Radiographic confirmation of cervical displacement. In two of the cases reduction occurred spontaneously; in the others it was brought about by manipulation, forcible traction in such cases being useless. The head should be extended diagonally in the direction between the backward line and the lateral line on the side of the convexity. The lateral process and the laminae of the vertebrae thus furnish a fulcrum by means of which the misplaced articular process is readily lifted. A slight rotatory movement then completes the reduction. The condition must not be confounded with torticollis, and can be distinguished by the relaxed condition of the muscles on the side towards which the twist exists.

T. R. WHIPHAM.

The treatment of rigid rotary lateral curvature of the spine by a new brace (*New York State Journ. Med.*, 1915, xv, p. 350).—**S. Kleinberg** describes a brace devised by him for lateral spinal curvature. The patient is placed in an Abbott jacket obtaining as much correction as possible, the jacket is promptly removed, filled with plaster from a torso, and over this the pattern is outlined for the brace-maker. The apparatus consists of pelvic and thoracic steel bands connected by several upright bars to which are attached canvas bands used for pressure. When applied to the patient the brace effectively maintains the flexed position. It is very essential in preparing the torso to provide sufficient room for complete correction, thus enabling the surgeon to carry out all of the active corrective treatment in the one instrument. One of the objections to the Abbott jacket has been that it caused compression of the chest on the side of the deformity. To obviate this there was inserted in the earlier braces an additional steel upright to guide the canvas bands, thus removing lateral pressure. This, however, was soon discarded as it invariably interfered with correction of the deviation deformity. In reviewing about 100 patients under observation during the past three years the author finds that practically no improvement is obtained in the following types of scoliosis: (1) Curvatures with sharp angulation of the ribs, sometimes called "razor-backs"; (2) high dorsal curves; (3) cases with marked distortion in the lumbar region; (4) severe S-shaped curves with the dorsal deformity equal in extent and degree to the lumbar; (5) mild deformities with congenital malformations. The following types of deformity were found favourable for treatment: (1) Single curves to the right or left of mild or moderate degree; (2) cases with long dorsal and short compensatory lumbar curves; (3) mild S-shaped curves; (4) cases with moderate deformity in the lower half of the dorsal region, and very little compensatory deformity above or below this. The results of treatment depend not upon the age of the patient, but upon the nature of the deformity and in the prognosis of a given

case one must take into consideration the following factors: (a) Length of time the deformity has been in existence; (b) location of the deformity; (c) degree of severity of the deformity; (d) type of the deformity, single, double, or triple curve; (e) congenital malformations. J. ALLAN.

Fracture of the lumbar spine without compression of cord (*Interstate Med. Journ.*, 1915, xxii, p. 1239).—**W. C. Campbell.**—Few cases of fracture of the spine unaccompanied by pressure on the cord have been recorded, but the writer thinks that such cases must frequently pass unnoticed, as the trauma may be slight or the symptoms referable to the spine be overshadowed by severe peripheral injury. Symptoms vary according to the seat of fracture. There may be pain, which is usually referred, as though in the sacro-iliac joint, sciatic nerve, or even the right lower quadrant of the abdomen, closely simulating appendicitis; muscular spasm may be general, unilateral or irregular. The patient usually complains of weakness, especially inability to lift even light objects. A small kyphosis may indicate the injury, but is by no means diagnostic, as an abnormally long spinous process may present the same appearance. The symptoms increase in neglected cases, and it is possible that callus-formation and further deformity may interfere with the canal. Five cases are recorded, one of which was a boy, aged 11 years, who two months previously had fallen from a tree 8 ft. on to the buttocks. He was stunned for several minutes, and on the second day had pain in the left lumbar region. The next day he was feverish, and continued so for several weeks, during which time he had pain in the left side and lower portion of the abdomen and in the left hip. The left hip gradually became flexed. When seen he walked with the hip flexed and his hand on the knee. The hip could not be extended beyond 90°. Abduction was slightly limited, but flexion and rotation were free; there was also some tenderness in the left side of the abdomen. The spine could not be bent to the right and only slightly to the left; flexion was about normal, but extension was limited. A skiagram showed lateral displacement, with possible fracture of the articular processes of the fourth lumbar vertebra. The treatment employed in these cases consisted in traction on the head and both lower extremities until over correction in the best possible position was attained, and the application of a plaster jacket. The result in all cases was successful.

T. R. WHIPHAM.

Transplantation of bone for non-regeneration of the tibial shaft (*Journ. Amer. Med. Assoc.*, 1916, lxvi, p. 177).—**M. S. Henderson.**—A girl, aged 6 years, had seventeen months previously had acute osteomyelitis of the left tibia. Pus was evacuated by incisions, and two months after the onset subperiosteal resection of the whole shaft of the bone was performed. When seen there was incomplete regeneration of the bone in the upper and middle thirds and a compensatory enlargement of the fibula. As the sinuses had been healed only two months nothing further was done, but three months later, as no further regeneration had occurred, a piece of bone, $4\frac{1}{2}$ in. long and $\frac{3}{8}$ in. wide, was removed from the opposite tibia and transplanted, silver wire being used to hold it in place. Three months later the graft was firmly united, but as the result of a slight accident a fracture occurred where the silver wire had caused an osteoporosis. At the end of a year there was only fibrous union, so a second graft was transplanted and

the wire removed. The result has been quite satisfactory, and the formation of a medullary cavity in the transplanted area can be seen in the skiagram.

T. R. WHIPHAM.

Arthroplasty of elbow (*Dub. Journ. Med. Science*, 1915, II, 449).—**D. Kennedy.**—A girl some nine or ten months before injured her elbow by a fall, and since then there was complete ankylosis. X rays showed that the humerus was not normal, but was somewhat battered. It was decided to operate and do an arthroplasty or adopt whatever treatment was suggested by the condition found. A projection was found on the inner side of the articular end of the humerus. The projection was removed off the ulnar aspect of the humerus, and the end of the humerus was put level. A flap was then taken partly from the lateral aspect of the arm, and almost entirely consisting of fat, and turned over the humerus, leaving the ulna and radius as they were.

J. ALLAN.

Crippled tuberculous children (*Brit. Journ. Tuberc.*, 1916, x, p. 12).—**H. F. Gauvain** points out that as disease as well as deformity is present, the correction of the latter is limited by the particular phase of the ailment. To illustrate this, examples of (a) acute dorso-lumbar caries with double psoas abscess, and (b) neglected dorsal caries with extreme deformity, are described. In (a) the main factor in the production of the deformity is the spasm of the psoas muscles, which causes flexion of the thighs and rigidity of the spine. The spine must therefore be gradually hyperextended and the psoas muscles stretched and kept at rest. To answer these requirements the "wheelbarrow" splint has been devised, which applies hyperextension at the correct point. Back splints are applied to the legs and are provided with foot-pieces to prevent foot-drop. The abscesses are aspirated but never opened, as the latter proceeding would destroy the surrounding fibrous envelope of the abscess. Treatment should be continued until there is complete loss of spinal rigidity, which is best investigated by dorsi-flexing the thighs separately and together with the patient fully recumbent. The spine should be freely movable in all directions. Pain, tenderness, and gross deformity should be absent. Abscesses should not be palpable and not discernible by X rays unless calcification has taken place. In (b) great help is derived from lateral skiagrams. If there is much necrotic material and extension in the form of psoas abscess it is probable that no extensive ankylosis has taken place. In this case recumbency and immobilisation must be enforced. If there is little disease but ankylosis and deformity the patient should be suspended from a gallows, the point of traction on the head being carefully selected. A moulded plaster jacket should then be applied to maintain the spine in the corrected position.

CHRISTOPHER ROLLESTON.

Correspondence.

To the Editor of THE BRITISH JOURNAL OF CHILDREN'S DISEASES.

Sir,—Is the body of a child who has died from measles capable of contagion?

This is a question which the Middlesbrough Stipendiary (Mr. T. W. Fry)

was called upon to decide on April the 28th, when a Corporation prosecution on a woman under a local Act for having allowed a person to come into contact with a body was again brought forward. At the first hearing the case was dismissed on the ground that there was no actual contact, and the case was then taken to the Higher Court, who returned it with a recommendation that the Stipendiary should convict if satisfied there was such close proximity as to risk infection.

Dr. Dingle, Medical Officer of Health for Middlesbrough, said that as an infectious disease measles was one of the most infectious, and spread more rapidly probably than any other disease. There was no doubt that when there was an epidemic of measles in the town last year very many cases arose through people visiting houses where there were cases of measles. Anyone entering a room where there was the body of a person who had died from measles was running a grave risk of infection.

In reply to the Stipendiary, Dr. Dingle said the range of infection would extend to all parts of an ordinary-sized room. A living case was capable of intense infection, and in the case of a dead body there must be infection.

The Stipendiary observed that the woman complained of had, on her own statement, laid out the body prior to the alleged offence and had experienced no ill-effect. Dr. Dingle replied it did not mean that she was not exposed to infection nor that she did not carry infection away with her.

The Stipendiary: Have you known anybody catch measles from a dead body? Measles has only officially come under our control this last year, and we have very little knowledge of the disease from that point of view.

Dr. Sidney G. Mostyn, Medical Officer of Health for Darlington, said that, judging from analogy in regard to other infectious diseases, risk of infection from a body of a person who had died from measles was considerable.

Judging from outbreaks at schools the atmosphere appeared to carry infection, and it was not necessary to come into actual contact.

The Stipendiary observed, in reversing his original decision, that he had the greatest possible doubt that the woman ran into danger in standing four or five feet from the body for three or four minutes, and he would not impose a penalty. The case bristled with technicalities, and he was bound to say was not a serious case on its merits.

Abingdon Road,
Middlesbrough.

I am, Sir,
Yours faithfully,
T. STAKE.

Review.

PAINLESS CHILDBIRTH: EUTOCIA AND NITROUS OXID-OXYGEN ANALGESIA.

By DR. CARL HENRY DAVIS, Associate of the Rush Medical College, Chicago: Forbes. 1916. Price \$1.

THE author defines eutocia as an easy, natural delivery. He holds that anæsthesia, or analgesia, is essential in the successful conduct of labour, and advocates the use of a combination of nitrous oxide and oxygen in preference to the "twilight sleep" of scopolamine. In a series of cases in which this anæsthetic was used the secretion of milk was more rapid than where no anæsthetic was used, as shown by the average weight of the babies in the two series.

H. C. C.